

WHAT IS CLAIMED IS:

1. A composition comprising a solid resin support having a multifunctional chemical moiety covalently attached thereto at a resin attachment site, said multifunctional chemical moiety including hydrophobic anchoring groups thereon.
2. The composition of claim 1 wherein said multifunctional chemical moiety is a trifunctional chemical moiety.
3. The composition of claim 1 wherein said multifunctional chemical moiety comprises an amino acid derivative including alkyl side chains thereon, and a reactive arm group selected from the group consisting of amino, carboxyl and sulfhydryl covalently attached to said resin attachment site.
4. The composition of claim 2 wherein said trifunctional chemical moiety comprises an amino acid derivative including alkyl side chains thereon, a reactive group selected from the group consisting of amino, hydroxyl, carboxyl and sulfhydryl thereon and a reactive arm group selected from the group consisting of amino, carboxyl and sulfhydryl covalently attached to said resin attachment site.
5. The composition of claim 3 wherein said reactive group includes a protecting group thereon.
6. The composition of claim 3 wherein said reactive arm group is an amino group covalently attached to said resin attachment site.
7. The composition of claim 3 wherein said reactive arm group is a carboxyl group covalently attached to said resin attachment site.
8. The composition of claim 3 wherein said amino acid is selected from the group consisting of glutamic acid, lysine, serine, homoserine, aspartic acid, and cysteine.
9. The composition of claim 3 wherein said protected reactive group includes a protecting group selected from the group consisting of Fmoc, and Boc.
10. The composition of claim 1 wherein said solid resin support is selected from the group consisting of ceramics, glass, latex, crosslinked polystyrenes, crosslinked polyacrylamides, natural polymers, gold, colloidal metal particles, silica gels, aerogels and hydrogels.
11. A method of covalently attaching a multifunctional chemical moiety to a solid resin support comprising:

reacting a multifunctional chemical moiety comprising an amino acid derivative including alkyl side chains thereon, a reactive group selected from the group consisting of amino, hydroxyl, carboxyl and sulfhydryl thereon and a reactive arm group selected from the group consisting of amino, carboxyl and sulfhydryl thereon with a solid resin support having a reactive site thereon to form a bound multifunctional chemical moiety - solid resin support composite.

12. The method of claim 11 wherein said multifunctional chemical moiety is initially reacted with a suitable protective group for said reactive group selected from the group consisting of amino, hydroxyl, carboxyl and sulfhydryl to form a protected multifunctional chemical moiety.

13. The method of claim 12 further including deprotecting said reactive group selected from the group consisting of amino, hydroxyl, carboxyl and sulfhydryl to provide a reactive site on said bound multifunctional chemical moiety - solid resin support composite.

14. The method of claim 11 wherein said solid resin support is selected from the group consisting of ceramics, glass, latex, crosslinked polystyrenes, crosslinked polyacrylamides, natural polymers, gold, colloidal metal particles, silica gels, aerogels and hydrogels.

15. A method of solid phase synthesis comprising reacting a multifunctional chemical moiety comprising an amino acid derivative including alkyl side chains thereon, a reactive group selected from the group consisting of amino, hydroxyl, carboxyl and sulfhydryl thereon and a reactive arm group selected from the group consisting of amino, carboxyl and sulfhydryl thereon with a solid resin support having a reactive site thereon to form a bound multifunctional chemical moiety - solid resin support composite; and,

reacting said bound multifunctional chemical moiety - solid resin support composite in a solid phase synthesis process.

16. The method of claim 15 wherein said solid resin support is selected from the group consisting of ceramics, glass, latex, crosslinked polystyrenes, crosslinked

polyacrylamides, natural polymers, gold, colloidal metal particles, silica gels, aerogels and hydrogels.